

between the colours of the upper- and underparts; tail as in the other members of the group; the fur is extremely soft. In the female the colours are not so bright, and the red on the underparts is almost wanting.

Measurements of the type, in skin (♂):—

	millim.
Head and body	188
Hind foot without claw	43
Tail (broken)	—
Tail of female without fur	143
„ „ with fur	180

Hab. Tingasi, Monbuttu.

Specimens examined:—

Brit. Mus. 87.12.1.33. ♂. Killed 16.9.83. (Type.)

„ „ 87.12.1.39. ♀. „ 10.10.83.

These specimens were mentioned by Mr. Oldfield Thomas (P. Z. S. 1888, p. 9) under *S. pyrrhopus*, with a note saying that Tingasi was by far the most easterly recorded locality for the species; also (P. Z. S. 1890, p. 447) under *S. pyrrhopus typicus* (partim).

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

April 3, 1895.—Dr. Henry Woodward, F.R.S.,
President, in the Chair.

The following communication was read:—

‘On a Comparison of the Permian Freshwater Lamellibranchiata from Russia with those from the Karoo Formation of Africa.’ By Dr. Wladimir Amalitsky, Professor of Geology in Warsaw University.

The freshwater shells from the Russian Permian deposits belonging to the genus *Palæomutela* are also known from the Karoo Beds of South and Central Africa, as pointed out by the Author in 1892. He has recently had the opportunity of studying the actual specimens from the Karoo Beds, and finds in them species of the groups *Palæomutela Inostranzewi*, *P. Keyserlingi*, *P. Verneuilii*, and *P. Murchisoni*; also of a new genus, the forms of which he had previously referred to *Naialites*, Dawson. All these groups are found also in Russia, and he gives a list of species found in the upper horizons (A, B, and C) of the Permian beds of Russia and in the Karoo beds. These upper beds of Russia have been determined by the Author as the freshwater equivalents of the Zechstein; consequently the Beaufort Beds of the Karoo Series, if considered as the

homotaxial equivalent of the European strata referred to above, should be regarded as Upper Permian. The Upper Permian group of freshwater lamellibranchiata of Russia, which bears traces of genetic relationship with the Carboniferous Anthracosidæ, and which was already well represented in Permo-Carboniferous and Lower Permian times, is, according to the Author, much older than the African fauna of the Beaufort Beds. These may be concluded to have migrated from Russia, the Gondwana Beds of India having probably been the connecting-link between all these deposits.

The Author gives a description of the fossils of the Karoo Series which he has examined, including a diagnosis of the new genus in which he places the fossils already alluded to as having been previously referred to the genus *Naiadites*.

April 24, 1895.—Dr. Henry Woodward, F.R.S.,
President, in the Chair.

The following communication was read:—

‘Supplementary Notes on the Systematic Position of the Trilobites.’ By H. M. Bernard, Esq., M.A., F.L.S., F.Z.S.

Since the publication of a paper by the Author in the ‘Quarterly Journal of the Geological Society’ for 1894, two important papers by Dr. Beecher have appeared, giving details as to the structure and appendages of *Triarthrus*.

In the present paper the Author discusses in detail the more recent discoveries in the light of the affinity between *Apus* and the trilobites, and endeavours to show how the results obtained by Dr. Beecher bear on the larger question as to the suggested origin of both of these animals from a chaetopod annelid modified in adaptation to a new manner of feeding.

May 22, 1895.—Dr. Henry Woodward, F.R.S.,
President, in the Chair.

The following communications were read:—

1. ‘On a Human Skull and Limb-bones found in the Palæolithic Terrace-Gravels at Galley Hill, Kent.’ By E. T. Newton, Esq., F.R.S., F.G.S.

A human skull with lower jaw and parts of the limb-bones were obtained by Mr. R. Elliott from the high-terrace gravels at Galley Hill, in which numerous Palæolithic implements have been found.

The skull is extremely long and narrow, its breadth-index being about 64, it is hyperdolichocephalic; it is likewise much depressed, having a height-index of about 67. The small extent of the cranium in both height and width shows that it has undergone little or no post-mortem compression, although it has become somewhat twisted in drying. The supraciliary ridges are large, the forehead somewhat receding, the proboscis prominent, and the occiput flattened below. All the chief sutures are obliterated. Three lower molars and two premolars are in place and are well worn, the three molars being as

nearly as possible equal in size. The limb-bones indicate an individual about 5 ft. 1 in. in height.

These remains are compared with the fossil human relics which have been found in Britain and on the Continent of Europe, as well as with the dolichocephalic races now living, and their relations to the 'Spy,' 'River-bed,' 'Long-barrow,' 'Eskimo,' and other types are pointed out.

The gravels, in which these human bones were found, overlie the Chalk at a height of about 90 feet above the Thames, and are about 10 feet thick. They form part of the high-terrace gravels extending from Dartford Heath to Northfleet, and their Palæolithic age is shown by the numerous implements which have been found in them, as well as by the mammalian remains which have been met with in similar beds near by, although not at Galley Hill. The human bones were seen *in situ* by Mr. R. Elliott and Mr. Matthew Heys, both of whom, in letters, speak positively as to the undisturbed condition of the 8 feet of gravel which overlay the bones when discovered.

2. 'On some Foraminifera of Rhætic Age, from Wedmore in Somerset.' By Frederick Chapman, Esq., F.R.M.S. (Communicated by Prof. T. Rupert Jones, F.R.S., F.G.S.)

1. The Author has examined six samples of clays and limestones from different horizons: these were collected by Mr. W. A. Sanford, F.G.S., from a quarry south-east of the village of Wedmore, which has yielded Megalosaurian remains. The rocks in this quarry are regularly stratified, and characteristic Rhætic fossils have been obtained from them by Mr. Sanford.

2. The microscopical details of the various clay-washings are given, and the great abundance of some forms of the acervuline foraminifer *Stacheia* is noticed, included amongst which are forms that have been previously described under the name of '*Psammosiphon*' by Vine, and '*Plaques de Rayonnés*' and '*Asteracanthion*' by MM. Terquem and Berthelin; the former occurring in Silurian strata, and the latter in the Lias. The Rhætic examples of the genus *Stacheia* have numerous aggregated crystals of zeolites (?), of which however only impressions remain, included in the material of the tests.

3. In a comparison made with the foraminiferal faunæ of the older and younger rocks respectively, the Rhætic fauna shows marked affinities with both the Upper Palæozoic and the Liassic facies.

The bathymetrical aspect of the foraminifera from Wedmore is, generally speaking, that of a shallow-water deposit. The genus *Stacheia* is represented so abundantly in some of these Rhætic rocks that the fossils constitute distinct layers in the beds of clay in which they are found. *Stacheia* appears to resemble *Polytrema* in reference to its habitat, and also in the microscopical structure of its test, with the exception that *Stacheia* includes in the test-wall minute sand-grains and other foreign material.

4. Twenty-six species of foraminifera, chiefly of arenaceous types, are described, nine of which are new forms, viz.: *Haplophragmium rheticum*, *Ammodiscus auriculus*, *A. fusiformis*, *Nodosinella wedmoriensis*, *Stacheia intermedia*, *S. triradiata*, *S. dispansa*, *S. cuspidata*, and *Truncatulina stelligera*.

MISCELLANEOUS.

A Query as to the Synonymy of Rhysota Armiti, Smith.

By C. HEDLEY, F.L.S.

THOSE who have had occasion to deal with the revision of species, either fauna by fauna or region by region, have observed that when an author has described a species without figuring it succeeding writers on the same subject have frequently renamed such species, but that when the first reporter also gave a figure of his species such usually escaped the infliction of synonymy. Thus Gray first received several common New-Zealand land-shells and gave unfigured descriptions of them; Gould and Pfeiffer succeeded him in the study of this fauna, and gave several of his species new names. Again, Brazier was the first to name, without illustrations, several common Papuan forms; but Tapparone Canefri, who wrote later on a collection from the identical localities, so failed to understand his predecessor that he renamed most of them. It was once remarked by Dr. P. P. Carpenter that, "with the best desires for accuracy and the greatest care, it is hardly possible for an author to so describe that his readers shall see shells as he sees them."

These reflections are suggested by a perusal of Mr. E. A. Smith's article "Descriptions of new Species of Land-Shells from New Guinea" (A. & M. N. H. 1895, xv. pp. 230-233), and especially a description therein contained of *Rhysota Armiti*, sp. n. As I have endeavoured to show, no positive identification can be made from any mere description, even from one as good as Mr. Smith's invariably are. With this reservation, I should conclude that examples of my *R. flyensis* (P. L. S. N. S. W. (2) vi. p. 71) stood for this literary portrait—because, firstly, I have received from Capt. Armit and recorded (*op. cit.* (ix.) p. 390) from Mount Maneao (not Maneau, as Mr. Smith writes) specimens of *R. flyensis*; secondly, because size alone, a variable feature in this genus, appears the only written discrepancy in the descriptions of each; and, thirdly, Mr. Smith seems in comparing *Armiti* with *hercules* to be unaware of the existence of *flyensis*.

The Breeding-habits of the Crayfish. By E. A. ANDREWS.

The breeding-habits of the European crayfish, *Astacus*, have been studied and recorded; but nothing is known of the processes of conjugation in the American species.

A study of *Cambarus affinis* kept in confinement shows that conjugation takes place in the autumn and in the spring, and that it differs in important respects from what is known in *Astacus*.

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